

## DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As below named inventors, we hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

**MULTIPLE LEVEL (ML), INTEGRATED SECTOR FORMAT (ISF),  
ERROR CORRECTION CODE (ECC) ENCODING AND DECODING PROCESSES  
FOR DATA STORAGE OR COMMUNICATION DEVICES AND SYSTEMS**

the specification of which is attached hereto unless the following box is checked:

was filed on \_\_\_\_\_  
as United States Application Number or PCT International Application Number \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56.

I hereby claim foreign priority benefits under 35 USC §119(a-d) or §365(b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):

Priority Claimed

(Number) (Country) (Day/Month/Year Filed)

I hereby claim the benefit under 35 USC §119(e) of any United States provisional application(s) listed below:

Provisional Application(s):

(Application Number) (Filing Date)

I hereby claim the benefit under 35 USC §120 of any United States application(s), or §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 USC §112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Number) (Filing Date) (Status - patented, pending, abandoned)

Power of Attorney:

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith:

Thomas R. Berthold	(#28,689)
Daniel E. Johnson	(#37,033)
Marc D. McSwain	(#44,929)
Alison D. Mortinger	(#39,306)
Khanh Q. Tran	(#41,352)

## DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

Address all telephone calls to:

Marc D. McSwain  
(408) 927-3364

Address all correspondence to:

Marc D. McSwain  
IBM Corporation C4TA/J2  
650 Harry Road  
San Jose, California 95120-6099

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of first inventor:



Inventor's signature:

Hideo Asano

Date:

12 Sep 2001

Residence:

353-5 Ohkura-Machi, Machida City, Tokyo, Japan 195-0062

Citizenship:

Japan

Post Office Address: Same

Full name of second inventor:

Martin Aureliano Hassner

Inventor's signature:

Date:

Residence:

1229 Christobal Privado, Mountain View, CA 94040

Citizenship:

USA

Post Office Address: Same

Full name of third inventor:

Inventor's signature:

Nyles Norbert Heise

Date:

Residence:

5538 Woodhurst Lane, San Jose, CA 95123

Citizenship:

USA

Post Office Address: Same

[illegible]

Full name of fourth inventor: Tetsuya Tamura

**Inventor's signature:**

Date:

Petrus Samra

17 Sep 2001

Residence: 7-4-9 Tsukimino, Yamato, Kanagawa, Japan 242-0002

**Citizenship:** Japan

Post Office Address: **Same**

Figure 1. The 128-bit key schedule for the proposed cipher. The key schedule is derived from the 128-bit master key  $K$  and the 128-bit subkey  $K_1$ . The key schedule is divided into 16 rounds, each consisting of 8 subkeys. The subkeys are used in the encryption and decryption processes. The key schedule is shown in a table with 16 rows and 8 columns. The rows are labeled 1 to 16, and the columns are labeled 1 to 8. The subkeys are represented by 128-bit strings.

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Hideo Asano

Date:

Residence:

353-5 Ohkura-Machi, Machida City, Tokyo, Japan 195-0062

Citizenship:

Japan

Post Office Address: Same

Full name of second inventor:

Martin Aureliano Hassner

Inventor's signature:



Date:

8/31/01

Residence:

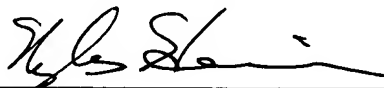
1229 Christobal Privado, Mountain View, CA 94040

Citizenship:

USA

Post Office Address: Same

Full name of third inventor:



Inventor's signature:

Nyles Norbert Heise

Date:

9/26/11

Residence:

5538 Woodhurst Lane, San Jose, CA 95123

Citizenship:

USA

Post Office Address: Same

[illegible]

Inventor's signature: \_\_\_\_\_ Date: \_\_\_\_\_

Citizenship: **Japan** Post Office Address: **Same**

[illegible]